

Monday, November 07, 2016 3:09:34 PM

Page 1

DAS
21
9-89

Stop *NR2*

**Insp.
Stamp**

DEC 01 2016

C1

100

Document Control

0.00

100

DOCUMENT CONTROL

DC

Memo

0.00

Doc.Control -USB or Paperwork

Photocopy bluefile & type labels per PPP 646.4001

DAS
28
9-89

DEC 14 2016

110

Pick Kit

0.00

110

Packaging

Memo

0.00

Packaging

NOV 30 2016

DAS 6 DAS 9-8927 9-8

120

QC4- 100% Inspect kits for completeness

0.00

120

QC

Memo

0.00

Quality Control

DAS
28
9-89

DEC 14 2016

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS <table style="width:100%; border: none;"> <tr> <td style="border: none;">Skid-tube ☐</td> <td style="border: none;">Cross tube ☐</td> <td style="border: none;">Water Jet ☐</td> <td style="border: none;">Engineering ☐</td> </tr> <tr> <td style="border: none;">Machining ☐</td> <td style="border: none;">Small Fab ☐</td> <td style="border: none;">Prod. Eng. Coord. ☐</td> <td style="border: none;">Quality ☐</td> </tr> <tr> <td style="border: none;">Thermoforming ☐</td> <td style="border: none;">Finishing ☐</td> <td style="border: none;">Rec/Store/Packaging ☐</td> <td style="border: none;">Other ☐</td> </tr> <tr> <td style="border: none;">Large Fab ☐</td> <td style="border: none;">Composite ☐</td> <td style="border: none;">Supplier ☐</td> <td></td> </tr> </table>						Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐	
Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐																						
Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐																						
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Large Fab ☐	Composite ☐	Supplier ☐																							
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval																		
Description Work Order Deviation				Disposition			Completed By																		
							Lead hand / Supervisor Approval Verification																		
							QC / QA Coordinator Approval																		
Root Cause		FAULT CATEGORY																							
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐	No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐		Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐		Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐		Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐																	
OTHER : ☐																									

Work Order ID 152775

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152775

Page 2

Item ID: 646.4001 Accept ***N900040100*** Setup Start ***NS1***
Revision ID: Stop ***NS2***
Item Name: AS350 Cable Cutter System
Start Date: 10/31/2016 Start Qty: 1.00 ***1*** Cust Item ID:
Required Date: 11/7/2016 Req'd Qty: 1.00 ***1*** Customer:
Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
130	Packaging	0.00							
130									
Packaging	Memo	0.00							
Packaging	Identify and pack for shipping as per PPP 646.4001								
	Location: <u>Eg 101</u>								
140	QC21- Final Inspection - Work Order Release	0.00							
140									
QC	Memo	0.02							
Quality Control									

DAS DAS
27 28
9-89 9-89

DEC 14 2016

DAS
21
9-89

DEC 15 2016

MF
16-12-14

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date : _____	Step #: _____	QTY Effective : _____		MRB (QSI042) Approval	
Description Work Order Deviation		Disposition		Completed By	
				Lead hand / Supervisor Approval Verification	
				QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY			
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐	No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐	Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐	Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐
OTHER : _____					

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152775

646 4001

Start Date: 10/31/2016

Required Date: 11/7/2016

Start Qty: 1.00

Required Qty: 1.00

Comments: IPP REV:A 12.10.23 NEW ISSUE DD VERF:JLM
IPP REV:B 15.01.08 AS PER DWG REV.B DD VERF:JLM IPP
REV:C 16.01.07 AS PER DWG REV.C DD VERF:JLM

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
600.0129		Purchased	No			100	f	224.0000	8	8			
600 0129 VHB TAPE 75935A65													
DAS 28 9-89													
**													
DAS 6 9-89													
NOV 30 2016													
DAS 27 9-89													
Location Loc Qty Loc Code													
CCK095 8													
m127920 8													
CCK096 216													
m135867 216													
600.0990		Purchased	No			100	Each	17.0000	1	1			
600 0990 Magnabond 6398 Part A Size 112 ml													
DAS 28 9-89													
**													
DAS 6 9-89													
NOV 30 2016													
DAS 27 9-89													
Location Loc Qty Loc Code													
CA2 12													
M135600 12													
PKG 5													
M134167 1													
M134249 2													
M135213 2													

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date :	Step #:	QTY Effective :		MRB (QSI042) Approval	
Description Work Order Deviation		Disposition		Completed By	
				Lead hand / Supervisor Approval Verification	
				QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY			
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐	No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ OTHER : ☐			
Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐				Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐	
Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐					

Picklist Print

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Page 2

Work Order ID: 152775

152775

Parent Item: 646.4001

646 4001

Parent Item Name: AS350 Cable Cutter System

Start Date: 10/31/2016

Required Date: 11/7/2016

Start Qty: 1.00

Required Qty: 1.00

600.0991
600 0991
Magnabond 6398 Part B Size 112 ml

Purchased No

100 Each

16.0000

1 1

**

DAS
6
9-89

NOV 30 2016
DAS
27
9-89

Location

Loc Qty

Loc Code

CA2

12

m135600

12

PKG

4

m134167

1

m134249

1

m135213

2

600.1012
600 1012
Sealant PR1425B2 (#654 sem)

Purchased No

100 Each

16.0000

1 1

**

DAS
6
9-89

NOV 30 2016
DAS
27
9-89

Location

Loc Qty

Loc Code

cck017

16

m135407

1

m135600

5

m135840

10

600.1013
600 1013
021200-3M TAPE PRIMER 94 PRIMER 24216

Purchased No

100 Each

685.0000

5 5

**

DEC 01 2016

DAS
6
9-89
DAS
27
9-89

Location

Loc Qty

Loc Code

CCK095

685

m131145

685

6/15/2016

1 1

**

150ell

NOV 30 2016
DAS
6
9-89
DAS
27
9-89

646.2910
646 2910
Deflector

Manufactured No

100 Each

0.0000

1 1

**

DAS
28
9-89

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Shop Packet Print

Page 2

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date : _____		Step #: _____		QTY Effective : _____			MRB (QSI042) Approval		
Description Work Order Deviation				Disposition				Completed By	
								Lead hand / Supervisor Approval Verification	
								QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY							
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐	No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐	Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐	Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐	OTHER : _____			

Picklist Print

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Page 3

Work Order ID: 152775

152775

Parent Item: 646.4001

646 4001

Parent Item Name: AS350 Cable Cutter System

Start Date: 10/31/2016

Required Date: 11/7/2016

Start Qty: 1.00

Required Qty: 1.00

646.3001
646 3001

Lower Cutter Assembly

Manufactured No

100 Each 5.0000 1 1

**

DAS
6
9-89

NOV 30 2016

DAS
27
9-89

Location

Loc Qty

Loc Code

cck018

5

150481

2

151686

3

646.3110
646 3110

Channel

Manufactured No

100 Each 5.0000 1 1

**

DAS
6
9-89

NOV 30 2016

DAS
27
9-89

Location

Loc Qty

Loc Code

cck020

5

141015

5

646.3210
646 3210

Support

Manufactured No

100 Each 1.0000 1 1

**

DAS
6
9-89

NOV 30 2016

DAS
27
9-89

Location

Loc Qty

Loc Code

cck020

1

142469

1

646.3301
646 3301

Upper Cutter Assy

Manufactured No

100 Each 5.0000 1 1

**

DAS
6
9-89

NOV 30 2016

DAS
27
9-89

Location

Loc Qty

Loc Code

cck018

5

149304

5

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date : _____	Step #: _____	QTY Effective : _____		MRB (QSI042) Approval	
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			Lead hand / Supervisor Approval Verification		
			QC / QA Coordinator Approval		
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐			FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐		
OTHER : _____					

Picklist Print

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Page 4

Work Order ID: 152775

152775

Parent Item: 646.4001

646 4001

Parent Item Name: AS350 Cable Cutter System

Start Date: 10/31/2016

Required Date: 11/7/2016

Start Qty: 1.00

Required Qty: 1.00

646.3510
646 3510

Strut

DAS
28
9-89

Manufactured No

100 Each

7.0000

1 1

**

DAS
6
9-89

DAS
27
9-89

Location

Loc Qty

Loc Code

CCK108A

7

140979

7

646.3511
646 3511

Strut

DAS
28
9-89

Manufactured No

100 Each

7.0000

1 1

**

DAS
6
9-89

DAS
27
9-89

Location

Loc Qty

Loc Code

cck104

1

141499

1

CCK108A

6

141499

6

646.3610
646 3610

Filler

DAS
28
9-89

Manufactured No

100 Each

15.0000

1 1

**

DEC 01 2016

DAS
6
9-89

DAS
27
9-89

Location

Loc Qty

Loc Code

cck104

15

150485

7

151687

8

646.3710
646 3710

Doubler

DAS
28
9-89

Manufactured No

100 Each

7.0000

1 1

**

DAS
6
9-89

NOV 30 2016

DAS
27
9-89

Location

Loc Qty

Loc Code

CCK002

7

140753

7

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

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OTHER : _____																																																																				

Picklist Print

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Page 5

Work Order ID: 152775

152775

Parent Item: 646.4001

646 4001

Parent Item Name: AS350 Cable Cutter System

Start Date: 10/31/2016

Required Date: 11/7/2016

Start Qty: 1.00

Required Qty: 1.00

646.3711

Manufactured No

100 Each

5.0000

1 1

646 3711

Clip

DAS
28
9-89

Location

Loc Qty

Loc Code

cck104

5

150685

5

**

DEC 01 2016

DAS 6 27
9-89 9-89

646.3712

Manufactured No

100 Each

12.0000

1 1

646 3712

Clip

DAS
28
9-89

Location

Loc Qty

Loc Code

cck104

12

140787

2

151018

10

**

DEC 01 2016

DAS 6 27
9-89 9-89

646.3713

Manufactured No

100 Each

6.0000

1 1

646 3713

Gusset

DAS
28
9-89

Location

Loc Qty

Loc Code

cck105

6

140084

6

**

NOV 30 2016

DAS 6 27
9-89 9-89

646.3714

Manufactured No

100 Each

6.0000

1 1

646 3714

Gusset

DAS
28
9-89

Location

Loc Qty

Loc Code

cck105

6

150125

6

**

NOV 30 2016

DAS 6 27
9-89 9-89

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date : _____	Step #: _____	QTY Effective : _____		MRB (QSI042) Approval	
Description Work Order Deviation			Disposition		
			Completed By		
			Lead hand / Supervisor Approval Verification		
			QC / QA Coordinator Approval		
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐			FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐		
OTHER : _____					

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Page 6

Work Order ID: 152775

152775

Parent Item: 646.4001

646 4001

Parent Item Name: AS350 Cable Cutter System

Start Date: 10/31/2016

Required Date: 11/7/2016

Start Qty: 1.00

Required Qty: 1.00

646.3715

Manufactured No

100 Each

18.0000

2 2

**

DEC 01 2016

646 3715

Strut Doubler

DAS
28
9-89

Location

Loc Qty

Loc Code

cck105

18

148568

6

151668

12

646.3716

Manufactured No

100 Each

18.0000

1 1

**

DEC 01 2016

646 3716

Gauge Bracket

DAS
28
9-89

Location

Loc Qty

Loc Code

cck105

18

140845

18

646.3717

Manufactured No

100 Each

15.0000

1 1

**

DEC 01 2016

646 3717

Doubler

DAS
28
9-89

Location

Loc Qty

Loc Code

cck105

15

142634

5

151423

10

646.3718

Manufactured No

100 Each

17.0000

2 2

**

DEC 01 2016

646 3718

Custom Washer

DAS
28
9-89

Location

Loc Qty

Loc Code

cck105

17

150389

5

151498

12

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DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval 		
Description Work Order Deviation				Disposition					
								Completed By	
								Lead hand / Supervisor Approval Verification	
								QC / QA Coordinator Approval	

Root Cause				FAULT CATEGORY			
Environment ☐	☐ No Re-verification	☐ Pressure/Forced	☐ Temperature/Cure	☐ Power Loss/Surge	☐ Positioned Wrong		
Design ☐	☐ Operator	☐ Bending	☐ Set-up	☐ Folio/Program	☐ Outside Dimensions		
Doc/Data ☐	☐ Offset/Setup	☐ Centre Not Concentric	☐ BOM/Route	☐ Grain	☐ Over/Under tolerance		
Equip/Tooling ☐	☐ Supplier	☐ Cracks	☐ Broken/Damage/Defect	☐ Weld	☐ Part Incorrect		
Handling/Pre ☐	☐ Training	☐ Crimp/Kink/Ripple/Wave	☐ Inspection Incomplete/Unqualified	☐ Wrong Stock Pulled	☐ Part Lost/Missing		
Material ☐	☐ Use for Testing	☐ Cuffs	☐ Contamination	☐ Out of Sequence	☐ Part Moved		
Internal Transport ☐	☐ Poor Information	☐ Crushing	☐ Countersink	☐ Off-set	☐ Drawing		
Tribal Knowledge ☐	☐ Rushing	☐ Heat Treat	☐ Cut Too Short	☐ Mislabeled	☐ Finish		
LOA ☐	☐ Product Improvement	☐ Wave/Twist in Tube	☐ Instructions Incomplete/Unclear	☐ Fit/Function	☐ Misread		
Substation ☐	☐ Process Improvement	☐ Marks/Chatter	☐ Drill Holes	☐ Misaligned/off center	☐ Turning Sequence		
Past Expiry Date ☐	☐ Manufacturing Process	OTHER : _____					
Misidentified ☐	☐ Past Due						

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Work Order ID: 152775

152775

Parent Item: 646.4001

646 4001

Parent Item Name: AS350 Cable Cutter System

Start Date: 10/31/2016

Required Date: 11/7/2016

Start Qty: 1.00

Required Qty: 1.00

646.3719

Manufactured No

100

Each

20.0000

2 2

646 3719

Doubler

**

DEC 01 2016

DAS 27
6 9-89

DAS 28
9-89

Location

Loc Qty

Loc Code

cck105

20

150288

3

150656

7

151663

10

646.3810

Manufactured No

100

Each

4.0000

2 2

646 3810

Bracket

**

DEC 01 2016

DAS 27
6 9-89

DAS 28
9-89

Location

Loc Qty

Loc Code

CCK106

4

150666

4

646.3811

Manufactured No

100

Each

4.0000

1 1

646 3811

Radius Block

**

DEC 01 2016

DAS 27
6 9-89

DAS 28
9-89

Location

Loc Qty

Loc Code

CCK106

4

148258

4

646.3812

Manufactured No

100

Each

8.0000

2 2

646 3812

Gusset Bracket

**

DEC 01 2016

DAS 27
6 9-89

DAS 28
9-89

Location

Loc Qty

Loc Code

CCK106

8

150594

8

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval		
Description Work Order Deviation				Disposition				Completed By	
								Lead hand / Supervisor Approval Verification	
Root Cause		FAULT CATEGORY							
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐				
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐				
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐				
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐				
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐				
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐				
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐				
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐				
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐				
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐				
Past Expiry Date ☐	Manufacturing Process ☐	OTHER :							
Misidentified ☐	Past Due ☐								

Picklist Print

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Work Order ID: 152775

152775

Parent Item: 646.4001

646 4001

Parent Item Name: AS350 Cable Cutter System

Start Date: 10/31/2016

Required Date: 11/7/2016

Start Qty: 1.00

Required Qty: 1.00

646.3813

Manufactured No

100

Each

9.0000

1 1

646 3813

Strut Bracket

**

DEC 01 2016

DAS 27

DAS 6 9-89

DAS 28 9-89

Location

Loc Qty

Loc Code

CCK106

9

150242

4

150933

5

646.3910

Manufactured No

100

Each

29.0000

4 4

646 3910

Shim

**

DEC 01 2016

DAS 6 27 9-89

DAS 28 9-89

Location

Loc Qty

Loc Code

CCK106

29

150218

11

150627

18

646.3911

Manufactured No

100

Each

26.0000

1 1

646 3911

Shim

**

DEC 01 2016

DAS 6 27 9-89

DAS 28 9-89

Location

Loc Qty

Loc Code

cck104

16

126229

16

CCK106

10

126059

10

646.3912

Manufactured No

100

Each

26.0000

4 4

646 3912

Shim

**

DEC 01 2016

DAS 6 27 9-89

DAS 28 9-89

Location

Loc Qty

Loc Code

CCK106

26

140238

2

150715

24

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Shop Packet Print

Page 8

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS <table style="width:100%; border: none;"> <tr> <td style="width:12.5%;">Skid-tube ☐</td> <td style="width:12.5%;">Cross tube ☐</td> <td style="width:12.5%;">Water Jet ☐</td> <td style="width:12.5%;">Engineering ☐</td> </tr> <tr> <td>Machining ☐</td> <td>Small Fab ☐</td> <td>Prod. Eng. Coord. ☐</td> <td>Quality ☐</td> </tr> <tr> <td>Thermoforming ☐</td> <td>Finishing ☐</td> <td>Rec/Store/Packaging ☐</td> <td>Other ☐</td> </tr> <tr> <td>Large Fab ☐</td> <td>Composite ☐</td> <td>Supplier ☐</td> <td></td> </tr> </table>						Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐																																															
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Date : _____		Step #: _____		QTY Effective : _____			MRB (QSI042) Approval																																																																
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								Lead hand / Supervisor Approval Verification																																																															
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Root Cause <table style="width:100%; border: none;"> <tr><td>Environment ☐</td><td>No Re-verification ☐</td></tr> <tr><td>Design ☐</td><td>Operator ☐</td></tr> <tr><td>Doc/Data ☐</td><td>Offset/Setup ☐</td></tr> <tr><td>Equip/Tooling ☐</td><td>Supplier ☐</td></tr> <tr><td>Handling/Pre ☐</td><td>Training ☐</td></tr> <tr><td>Material ☐</td><td>Use for Testing ☐</td></tr> <tr><td>Internal Transport ☐</td><td>Poor Information ☐</td></tr> <tr><td>Tribal Knowledge ☐</td><td>Rushing ☐</td></tr> <tr><td>LOA ☐</td><td>Product Improvement ☐</td></tr> <tr><td>Substation ☐</td><td>Process Improvement ☐</td></tr> <tr><td>Past Expiry Date ☐</td><td>Manufacturing Process ☐</td></tr> <tr><td>Misidentified ☐</td><td>Past Due ☐</td></tr> </table>		Environment ☐	No Re-verification ☐	Design ☐	Operator ☐	Doc/Data ☐	Offset/Setup ☐	Equip/Tooling ☐	Supplier ☐	Handling/Pre ☐	Training ☐	Material ☐	Use for Testing ☐	Internal Transport ☐	Poor Information ☐	Tribal Knowledge ☐	Rushing ☐	LOA ☐	Product Improvement ☐	Substation ☐	Process Improvement ☐	Past Expiry Date ☐	Manufacturing Process ☐	Misidentified ☐	Past Due ☐	FAULT CATEGORY <table style="width:100%; border: none;"> <tr> <td style="width:33%;">Pressure/Forced ☐</td> <td style="width:33%;">Temperature/Cure ☐</td> <td style="width:33%;">Power Loss/Surge ☐</td> <td style="width:33%;">Positioned Wrong ☐</td> </tr> <tr> <td>Bending ☐</td> <td>Set-up ☐</td> <td>Folio/Program ☐</td> <td>Outside Dimensions ☐</td> </tr> <tr> <td>Centre Not Concentric ☐</td> <td>BOM/Route ☐</td> <td>Grain ☐</td> <td>Over/Under tolerance ☐</td> </tr> <tr> <td>Cracks ☐</td> <td>Broken/Damage/Defect ☐</td> <td>Weld ☐</td> <td>Part Incorrect ☐</td> </tr> <tr> <td>Crimp/Kink/Ripple/Wave ☐</td> <td>Inspection Incomplete/Unqualified ☐</td> <td>Wrong Stock Pulled ☐</td> <td>Part Lost/Missing ☐</td> </tr> <tr> <td>Cuffs ☐</td> <td>Contamination ☐</td> <td>Out of Sequence ☐</td> <td>Part Moved ☐</td> </tr> <tr> <td>Crushing ☐</td> <td>Countersink ☐</td> <td>Off-set ☐</td> <td>Drawing ☐</td> </tr> <tr> <td>Heat Treat ☐</td> <td>Cut Too Short ☐</td> <td>Mislabeled ☐</td> <td>Finish ☐</td> </tr> <tr> <td>Wave/Twist in Tube ☐</td> <td>Instructions Incomplete/Unclear ☐</td> <td>Fit/Function ☐</td> <td>Misread ☐</td> </tr> <tr> <td>Marks/Chatter ☐</td> <td>Drill Holes ☐</td> <td>Misaligned/off center ☐</td> <td>Turning Sequence ☐</td> </tr> </table>						Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐
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Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐																																																																				
OTHER : _____																																																																							

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Work Order ID: 152775

152775

Parent Item: 646.4001

646 4001

Parent Item Name: AS350 Cable Cutter System

Start Date: 10/31/2016

Required Date: 11/7/2016

Start Qty: 1.00

Required Qty: 1.00

646.3913

Manufactured No

100

Each

66.0000

1

1

646 3913

Shim

**

DEC 01 2016

DAS 6 27
9-89 9-89

DAS 28
9-89

Location

Loc Qty

Loc Code

CCK106

66

126060

66

646.9410

Manufactured No

100

Each

75.0000

1

1

646 9410

Shim

**

DEC 01 2016

DAS 6 27
9-89 9-89

DAS 28
9-89

Location

Loc Qty

Loc Code

cck011

75

140671

75

647.0112

Manufactured No

100

Each

77.0000

2

2

647 0112

Strut Bracket

**

DEC 01 2016

DAS 6 27
9-89 9-89

DAS 28
9-89

Location

Loc Qty

Loc Code

CCK107

77

150114

42

150895

15

151352

20

647.7703

Manufactured No

100

Each

0.0000

2

2

647 7703

Strut Assembly

**

151450 DEC 01 2016

DAS 6 27
9-89 9-89

DAS 28
9-89

650.9201

Manufactured No

100

Each

16.0000

2

2

650 9201

Eyelet Bracket Assembly

**

DEC 01 2016

DAS 6 27
9-89 9-89

DAS 28
9-89

Location

Loc Qty

Loc Code

cck126

16

150359

16

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐																																																													
Date : _____		Step #: _____		QTY Effective : _____			MRB (QSI042) Approval																																																										
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Root Cause		FAULT CATEGORY																																																															
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐	Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐	Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐	Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐	Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐	Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐	Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐	Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐	LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐	Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐	Past Expiry Date ☐	Manufacturing Process ☐	OTHER : _____			
Misidentified ☐	Past Due ☐																																																																

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Work Order ID: 152775

152775

Parent Item: 646.4001

646 4001

Parent Item Name: AS350 Cable Cutter System

Start Date: 10/31/2016

Required Date: 11/7/2016

Start Qty: 1.00

Required Qty: 1.00

AN3-11A

Purchased

No

100

Each

112.0000

10 10

AN3-11A

Bolt

**

DEC 01 2016

DAS 27
6 9-89
DAS 27
9-89

Location

Loc Qty

Loc Code

over003

100

m135767

100

ST349

12

m135390

12

AN3-12A

Purchased

No

100

Each

195.0000

2 2

AN3-12A

Bolt

**

DEC 01 2016

DAS 27
6 9-89
DAS 27
9-89

Location

Loc Qty

Loc Code

ST349

195

m133064

14

m135603

181

AN3-13A

Purchased

No

100

Each

43.0000

1 1

AN3-13A

Bolt

**

DEC 01 2016

DAS 27
6 9-89
DAS 27
9-89

Location

Loc Qty

Loc Code

GA

20

m127070

20

ST349

23

m134365

23

AN316C4R

Purchased

No

100

Each

21.0000

2 2

AN316C4R

Nut, Jam

**

DEC 01 2016

DAS 27
6 9-89
DAS 27
9-89

Location

Loc Qty

Loc Code

ST331

21

m133234

1

m135840

20

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Page 10

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date : _____		Step # : _____		QTY Effective : _____			MRB (QSI042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval		
Description Work Order Deviation				Disposition					

Root Cause				FAULT CATEGORY			
☐ Environment	☐ No Re-verification	☐ Pressure/Forced	☐ Temperature/Cure	☐ Power Loss/Surge	☐ Positioned Wrong		
☐ Design	☐ Operator	☐ Bending	☐ Set-up	☐ Folio/Program	☐ Outside Dimensions		
☐ Doc/Data	☐ Offset/Setup	☐ Centre Not Concentric	☐ BOM/Route	☐ Grain	☐ Over/Under tolerance		
☐ Equip/Tooling	☐ Supplier	☐ Cracks	☐ Broken/Damage/Defect	☐ Weld	☐ Part Incorrect		
☐ Handling/Pre	☐ Training	☐ Crimp/Kink/Ripple/Wave	☐ Inspection Incomplete/Unqualified	☐ Wrong Stock Pulled	☐ Part Lost/Missing		
☐ Material	☐ Use for Testing	☐ Cuffs	☐ Contamination	☐ Out of Sequence	☐ Part Moved		
☐ Internal Transport	☐ Poor Information	☐ Crushing	☐ Countersink	☐ Off-set	☐ Drawing		
☐ Tribal Knowledge	☐ Rushing	☐ Heat Treat	☐ Cut Too Short	☐ Mislabeled	☐ Finish		
☐ LOA	☐ Product Improvement	☐ Wave/Twist in Tube	☐ Instructions Incomplete/Unclear	☐ Fit/Function	☐ Misread		
☐ Substation	☐ Process Improvement	☐ Marks/Chatter	☐ Drill Holes	☐ Misaligned/off center	☐ Turning Sequence		
☐ Past Expiry Date	☐ Manufacturing Process	OTHER : _____					
☐ Misidentified	☐ Past Due						

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Work Order ID: 152775

152775

Parent Item: 646.4001

646 4001

Parent Item Name: AS350 Cable Cutter System

Start Date: 10/31/2016

Required Date: 11/7/2016

Start Qty: 1.00

Required Qty: 1.00

AN3-3A Purchased No 100 Each 167.0000 4 4

AN3-3A

Bolt

**

DEC 11 2016

DAS 6 27
9-89 9-89

Location

Loc Qty

Loc Code

over003

50

m135865

50

ST350

117

m135466

64

m135566

3

m135672

50

AN3-4A Purchased No 100 Each 246.0000 10 10

AN3-4A

Bolt

**

DEC 11 2016

DAS 6 27
9-89 9-89

Location

Loc Qty

Loc Code

ST350

246

m135704

246

AN3-5A Purchased No 100 Each 228.0000 2 2

AN3-5A

Bolt

**

DEC 01 2016

DAS 6 27
9-89 9-89

Location

Loc Qty

Loc Code

FP001

155

m134502

155

ST350

73

m135058

73

AN3-6A Purchased No 100 Each 127.0000 2 2

AN3-6A

Bolt

**

DEC 01 2016

DAS 6 27
9-89 9-89

Location

Loc Qty

Loc Code

ST349

127

M134955

127

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DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS <table style="width:100%; border: none;"> <tr> <td style="width:12.5%;">Skid-tube ☐</td> <td style="width:12.5%;">Cross tube ☐</td> <td style="width:12.5%;">Water Jet ☐</td> <td style="width:12.5%;">Engineering ☐</td> </tr> <tr> <td>Machining ☐</td> <td>Small Fab ☐</td> <td>Prod. Eng. Coord. ☐</td> <td>Quality ☐</td> </tr> <tr> <td>Thermoforming ☐</td> <td>Finishing ☐</td> <td>Rec/Store/Packaging ☐</td> <td>Other ☐</td> </tr> <tr> <td>Large Fab ☐</td> <td>Composite ☐</td> <td>Supplier ☐</td> <td></td> </tr> </table>						Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐	
Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐																						
Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐																						
Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐																						
Large Fab ☐	Composite ☐	Supplier ☐																							
Date : _____		Step #: _____		QTY Effective : _____			MRB (QSI042) Approval																		
Description Work Order Deviation				Disposition																					
								Completed By																	
								Lead hand / Supervisor Approval Verification																	
								QC / QA Coordinator Approval																	
Root Cause		FAULT CATEGORY																							
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐																				
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐																				
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐																				
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐																				
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐																				
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐																				
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐																				
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐																				
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐																				
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐																				
Past Expiry Date ☐	Manufacturing Process ☐	OTHER : _____																							
Misidentified ☐	Past Due ☐																								

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Work Order ID: 152775

152775

Parent Item: 646.4001

646 4001

Parent Item Name: AS350 Cable Cutter System

Start Date: 10/31/2016

Required Date: 11/7/2016

Start Qty: 1.00

Required Qty: 1.00

AN44-5A
Purchased No
AN44-5A
Eyebolt

100 Each 15.0000 2 2

** 135953

DEC 01 2016

DAS 6 27
9-89 9-89

DAS 28
9-89

Location

Loc Qty

Loc Code

ST339

15

m135127

3

m135774

12

AN4C7A
Purchased No
AN4C7A
BOLT

100 Each 104.0000 2 2

** 135953

DEC 01 2016

DAS 6 27
9-89 9-89

DAS 28
9-89

Location

Loc Qty

Loc Code

OVER002

70

m135864

70

ST345

34

m135470

34

AN665-34R
Purchased No
AN665-34R
Clevis

100 Each 31.0000 2 2

** 135953

DEC 01 2016

DAS 6 27
9-89 9-89

DAS 28
9-89

Location

Loc Qty

Loc Code

ST330

31

M135603

11

M135948

20

CCR264SS3-02
Purchased No
CCR264SS3-02
Cherry Rivet

100 Each 151.0000 36 36

** 135953

DEC 01 2016

DAS 6 27
9-89 9-89

DAS 28
9-89

Location

Loc Qty

Loc Code

ST321

151

M135603

151

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Page 12

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐							
Date : _____		Step #: _____		QTY Effective : _____			MRB (QSI042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval				
Description Work Order Deviation				Disposition							
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐		FAULT CATEGORY		Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐		Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐		Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐	
		OTHER : _____									

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Page 13

Work Order ID: 152775

152775

Parent Item: 646.4001

646 4001

Parent Item Name: AS350 Cable Cutter System

Start Date: 10/31/2016

Required Date: 11/7/2016

Start Qty: 1.00

Required Qty: 1.00

CR3213-5-3 Purchased

No

100

Each

162.0000

14

14

CR3213-5-3

Cherry Rivet

DAS
28
9-89

Location

Loc Qty

Loc Code

CCK003

100

m135865

100

ST319

62

m134142

1

m135408

61

**

DEC 01 2016

DAS DAS
6 27
9-89 9-89

MS20426AD5-7 Purchased

No

100

Each

855.0000

2

2

MS20426AD5-7

RIVET

DAS
28
9-89

Location

Loc Qty

Loc Code

ST311

855

M133922

855

**

DEC 01 2016

DAS DAS
6 27
9-89 9-89

MS20470AD5-5.5 Purchased

No

100

Each

814.0000

8

8

MS20470AD5-5 5

Rivet

DAS
28
9-89

Location

Loc Qty

Loc Code

ST309

814

m134063

814

**

DEC 01 2016

DAS
DAS 27
6 9-89
9-89

MS20470AD5-6 Purchased

No

100

Each

704.0000

8

8

MS20470AD5-6

RIVET

DAS
28
9-89

Location

Loc Qty

Loc Code

ST309

704

124089

704

**

DEC 01 2016

DAS DAS
6 27
9-89 9-89

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS <table style="width:100%; border: none;"> <tr> <td style="width:15%;">Skid-tube ☐</td> <td style="width:15%;">Cross tube ☐</td> <td style="width:15%;">Water Jet ☐</td> <td style="width:15%;">Engineering ☐</td> </tr> <tr> <td>Machining ☐</td> <td>Small Fab ☐</td> <td>Prod. Eng. Coord. ☐</td> <td>Quality ☐</td> </tr> <tr> <td>Thermoforming ☐</td> <td>Finishing ☐</td> <td>Rec/Store/Packaging ☐</td> <td>Other ☐</td> </tr> <tr> <td>Large Fab ☐</td> <td>Composite ☐</td> <td>Supplier ☐</td> <td></td> </tr> </table>						Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐	
Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐																						
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Date : _____		Step #: _____		QTY Effective : _____			MRB (QSI042) Approval																		
Description Work Order Deviation				Disposition																					
								Completed By																	
								Lead hand / Supervisor Approval Verification																	
								QC / QA Coordinator Approval																	
Root Cause		FAULT CATEGORY																							
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐																				
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐																				
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐																				
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐																				
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐																				
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐																				
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LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐																				
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐																				
Past Expiry Date ☐	Manufacturing Process ☐	OTHER : _____																							
Misidentified ☐	Past Due ☐																								

Picklist Print

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Page 14

Work Order ID: 152775

152775

Parent Item: 646.4001

646 4001

Parent Item Name: AS350 Cable Cutter System

Start Date: 10/31/2016

Required Date: 11/7/2016

Start Qty: 1.00

Required Qty: 1.00

MS20470AD5-7

Purchased

No

100

Each

410.0000

3

3

MS20470AD5-7

Rivet

DAS
28
9-89

Location

Loc Qty

Loc Code

ST309

410

123425

410

100

Each

0.0000

2

2

MS21042-08

MS21042L08

Purchased

No

MS21042-08

USE MS21042L08

DAS
28
9-89

MS21042-3

MS21042L3

Purchased

No

100

Each

0.0000

2

2

MS21042-3

Nut

DAS
28
9-89

MS21042L3

Purchased

No

100

Each

2,237.000

61

61

MS21042L3

Nut

DAS
28
9-89

Location

Loc Qty

Loc Code

FP001

7

M130922

7

GA

216

m134360

108

m135135

108

OVER007

1200

m135945

600

M136044

600

ST303

814

m135530

211

m135600

3

m135767

600

DAS
28
9-89

**

**

**

**

DEC 01 2016

DEC 01 2016

DEC 01 2016

DEC 01 2016

DAS
6
9-89
27
9-89

DAS
6
9-89
27
9-89

DAS
6
9-89
27
9-89

DAS
6
9-89
27
9-89

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date : _____		Step #: _____		QTY Effective : _____			MRB (QSI042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval		
Description Work Order Deviation				Disposition					
Root Cause		FAULT CATEGORY							
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐				
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐				
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐				
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐				
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐				
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐				
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐				
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐				
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐				
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐				
Past Expiry Date ☐	Manufacturing Process ☐	OTHER : _____							
Misidentified ☐	Past Due ☐								

Picklist Print

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Work Order ID: 152775

152775

Parent Item: 646.4001

646 4001

Parent Item Name: AS350 Cable Cutter System

Start Date: 10/31/2016

Required Date: 11/7/2016

Start Qty: 1.00

Required Qty: 1.00

MS21042L4

Purchased

No

100

Each

2,293.000

2

2

MS21042L4

Nut

**

DEC 01 2016

DAS 6 27
9-89 9-89

DAS 28
9-89

Location

Loc Qty

Loc Code

FP001

34

m133363

34

GA

204

m135058

204

OVER007

500

m135979

500

ST303

1555

m135704

94

m135774

461

m135864

1000

MS21047-3

Purchased

No

100

Each

99.0000

18

18

MS21047-3

Nut Plate

**

DEC 01 2016

DAS 6 27
9-89 9-89

DAS 28
9-89

Location

Loc Qty

Loc Code

ST301

99

m135603

9

m135774

90

MS24693-C278

Purchased

No

100

Each

30.0000

5

5

MS24693-C278

Screw

**

DEC 01 2016

DAS 6 27
9-89 9-89

DAS 28
9-89

Location

Loc Qty

Loc Code

ST286

30

m135135

30

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS <table style="width:100%; border: none;"> <tr> <td style="border: none;">Skid-tube ☐</td> <td style="border: none;">Cross tube ☐</td> <td style="border: none;">Water Jet ☐</td> <td style="border: none;">Engineering ☐</td> </tr> <tr> <td style="border: none;">Machining ☐</td> <td style="border: none;">Small Fab ☐</td> <td style="border: none;">Prod. Eng. Coord. ☐</td> <td style="border: none;">Quality ☐</td> </tr> <tr> <td style="border: none;">Thermoforming ☐</td> <td style="border: none;">Finishing ☐</td> <td style="border: none;">Rec/Store/Packaging ☐</td> <td style="border: none;">Other ☐</td> </tr> <tr> <td style="border: none;">Large Fab ☐</td> <td style="border: none;">Composite ☐</td> <td style="border: none;">Supplier ☐</td> <td></td> </tr> </table>				Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐																																																
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Doc/Data ☐	Offset/Setup ☐																																																																			
Equip/Tooling ☐	Supplier ☐																																																																			
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OTHER : _____																																																																				

Picklist Print

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Work Order ID: 152775

152775

Parent Item: 646.4001

646 4001

Parent Item Name: AS350 Cable Cutter System

Start Date: 10/31/2016

Required Date: 11/7/2016

Start Qty: 1.00

Required Qty: 1.00

MS24694-S51

Purchased

No

100

Each

214.0000

5

5

MS24694-S51

Screw

**

DEC 01 2016

DAS 6 9-89

DAS 27 9-89

DAS 28 9-89

Location

Loc Qty

Loc Code

ST284

214

m135442

214

MS24694-S54

Purchased

No

100

Each

198.0000

2

2

MS24694-S54

SCREW

**

DEC 01 2016

DAS 6 9-89

DAS 27 9-89

DAS 28 9-89

Location

Loc Qty

Loc Code

ST284

198

m135672

13

m135948

185

MS24694-S55

Purchased

No

100

Each

198.0000

3

3

MS24694-S55

Screw

**

DEC 01 2016

DAS 6 9-89

DAS 27 9-89

DAS 28 9-89

Location

Loc Qty

Loc Code

ST283

198

m135766

98

m136042

100

MS27039-08-13

Purchased

No

100

Each

83.0000

2

2

MS27039-08-13

Screw

**

DEC 01 2016

DAS 6 9-89

DAS 27 9-89

DAS 28 9-89

Location

Loc Qty

Loc Code

ST278

83

124326

83

Monday, November 07, 2016 3:09:34 PM

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DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS <table style="width:100%; border: none;"> <tr> <td style="width:12.5%;">Skid-tube ☐</td> <td style="width:12.5%;">Cross tube ☐</td> <td style="width:12.5%;">Water Jet ☐</td> <td style="width:12.5%;">Engineering ☐</td> </tr> <tr> <td>Machining ☐</td> <td>Small Fab ☐</td> <td>Prod. Eng. Coord. ☐</td> <td>Quality ☐</td> </tr> <tr> <td>Thermoforming ☐</td> <td>Finishing ☐</td> <td>Rec/Store/Packaging ☐</td> <td>Other ☐</td> </tr> <tr> <td>Large Fab ☐</td> <td>Composite ☐</td> <td>Supplier ☐</td> <td></td> </tr> </table>						Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐	
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Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐																						
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Date : _____		Step # : _____		QTY Effective : _____			MRB (QSI042) Approval																		
Description Work Order Deviation				Disposition																					
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								Lead hand / Supervisor Approval Verification																	
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Root Cause		FAULT CATEGORY																							
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐																				
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐																				
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐																				
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐																				
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Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐																				
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Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐																				
Past Expiry Date ☐	Manufacturing Process ☐	OTHER : _____																							
Misidentified ☐	Past Due ☐																								

Picklist Print

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Work Order ID: 152775

152775
646 4001

Parent Item: 646.4001

Parent Item Name: AS350 Cable Cutter System

Start Date: 10/31/2016

Required Date: 11/7/2016

Start Qty: 1.00

Required Qty: 1.00

MS27039-1-10

Purchased

No

100

Each

513.0000

2

2

MS27039-1-10
SCREW

DAS
28
9-89

Location

Loc Qty

Loc Code

GA

17

m129541

17

over006

300

m135774

300

ST280

196

m135603

196

**

DEC 11 2016

DAS 6 27
9-89 9-89

MS27039-1-12

Purchased

No

100

Each

71.0000

6

6

MS27039-1-12
Screw

DAS
28
9-89

Location

Loc Qty

Loc Code

ST280

71

m135566

71

**

DEC 01 2016

DAS 6 27
9-89 9-89

MS27039-1-16

Purchased

No

100

Each

122.0000

24

24

MS27039-1-16
Screw

DAS
28
9-89

Location

Loc Qty

Loc Code

over006

100

m135865

100

ST280

22

m135566

22

**

DEC 01 2016

DAS 6 27
9-89 9-89

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS <table style="width:100%; border: none;"> <tr> <td style="width:12.5%;">Skid-tube ☐</td> <td style="width:12.5%;">Cross tube ☐</td> <td style="width:12.5%;">Water Jet ☐</td> <td style="width:12.5%;">Engineering ☐</td> </tr> <tr> <td>Machining ☐</td> <td>Small Fab ☐</td> <td>Prod. Eng. Coord. ☐</td> <td>Quality ☐</td> </tr> <tr> <td>Thermoforming ☐</td> <td>Finishing ☐</td> <td>Rec/Store/Packaging ☐</td> <td>Other ☐</td> </tr> <tr> <td>Large Fab ☐</td> <td>Composite ☐</td> <td>Supplier ☐</td> <td></td> </tr> </table>						Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐																																							
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Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐																																																												
Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐																																																												
Large Fab ☐	Composite ☐	Supplier ☐																																																													
Date : _____		Step #: _____		QTY Effective : _____			MRB (QSI042) Approval																																																								
Description Work Order Deviation				Disposition				Completed By																																																							
								Lead hand / Supervisor Approval Verification																																																							
								QC / QA Coordinator Approval																																																							
Root Cause		FAULT CATEGORY																																																													
Environment ☐	Design ☐	Doc/Data ☐	Equip/Tooling ☐	Handling/Pre ☐	Material ☐	Internal Transport ☐	Tribal Knowledge ☐	LOA ☐	Substation ☐	Past Expiry Date ☐	Misidentified ☐	No Re-verification ☐	Operator ☐	Offset/Setup ☐	Supplier ☐	Training ☐	Use for Testing ☐	Poor Information ☐	Rushing ☐	Product Improvement ☐	Process Improvement ☐	Manufacturing Process ☐	Past Due ☐	Pressure/Forced ☐	Bending ☐	Centre Not Concentric ☐	Cracks ☐	Crimp/Kink/Ripple/Wave ☐	Cuffs ☐	Crushing ☐	Heat Treat ☐	Wave/Twist in Tube ☐	Marks/Chatter ☐	Temperature/Cure ☐	Set-up ☐	BOM/Route ☐	Broken/Damage/Defect ☐	Inspection Incomplete/Unqualified ☐	Contamination ☐	Countersink ☐	Cut Too Short ☐	Instructions Incomplete/Unclear ☐	Drill Holes ☐	Power Loss/Surge ☐	Folio/Program ☐	Grain ☐	Weld ☐	Wrong Stock Pulled ☐	Out of Sequence ☐	Off-set ☐	Mislabeled ☐	Fit/Function ☐	Misaligned/off center ☐	Positioned Wrong ☐	Outside Dimensions ☐	Over/Under tolerance ☐	Part Incorrect ☐	Part Lost/Missing ☐	Part Moved ☐	Drawing ☐	Finish ☐	Misread ☐	Turning Sequence ☐
OTHER : _____																																																															

Picklist Print

Monday, November 07, 2016 3:09:34 PM

Page 18

Work Order ID: 152775

152775

Parent Item: 646.4001

646 4001

Parent Item Name: AS350 Cable Cutter System

Start Date: 10/31/2016

Required Date: 11/7/2016

Start Qty: 1.00

Required Qty: 1.00

MS27039-1-19

Purchased

No

100

Each

123.0000

22

22

MS27039-1-19

Screw

**

136182x17

DAS
6
9-89

DAS
27
9-89

DEC 0 1 2016

Location

Loc Qty

Loc Code

GA

80

m134134

80

ST280

43

m135774

43

MS27039-1-20

Purchased

No

100

Each

56.0000

2

2

MS27039-1-20

Screw

**

DEC 0 1 2016

DAS
6
9-89

DAS
27
9-89

Location

Loc Qty

Loc Code

ST280

56

124326

56

MS27039-1-21

Purchased

No

100

Each

225.0000

4

4

MS27039-1-21

Screw

**

DEC 0 1 2016

DAS
6
9-89

DAS
27
9-89

Location

Loc Qty

Loc Code

ST280

225

m127904

225

NAS1149F0332P

Purchased

No

100

Each

2,822.000

144

144

NAS1149F0332P

Washer

**

DEC 0 1 2016

DAS
6
9-89

DAS
27
9-89

Location

Loc Qty

Loc Code

GA

276

m133709

276

ST260a

2000

m135948

2000

ST262

546

m135544

546

DAS
28
9-89

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐							
Date : _____		Step # : _____		QTY Effective : _____			MRB (QSI042) Approval				
Description Work Order Deviation				Disposition				Completed By			
								Lead hand / Supervisor Approval Verification			
								QC / QA Coordinator Approval			
Root Cause				FAULT CATEGORY							
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐		No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐		Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐		Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐		Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐	
OTHER : _____											

Picklist Print

Monday, November 07, 2016 3:09:34 PM

Page 19

Work Order ID: 152775

152775

Parent Item: 646.4001

646 4001

Parent Item Name: AS350 Cable Cutter System

Start Date: 10/31/2016

Required Date: 11/7/2016

Start Qty: 1.00

Required Qty: 1.00

NAS1149F0363P

Purchased

No

100

Each

215.0000

2

2

NAS1149F0363P

WASHER

DAS
28
9-89

Location

Loc Qty

Loc Code

ST262

215

124555

215

NAS1149F0432P

Purchased

No

100

Each

1,371.000

4

4

NAS1149F0432P

WASHER

DAS
28
9-89

Location

Loc Qty

Loc Code

ST260a

1000

M135704

1000

ST262

371

M134955

371

NAS1149FN832P

Purchased

No

100

Each

1,519.000

4

4

NAS1149FN832P

Washer

DAS
28
9-89

Location

Loc Qty

Loc Code

GA

1389

M133769

89

M135058

1300

ST263

130

M135603

130

NOV 30 2016

DAS 6 27
9-89 9-89

NOV 30 2016

DAS 6 27
9-89 9-89

NOV 30 2016

DAS 6 27
9-89 9-89

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date : _____		Step # : _____		QTY Effective : _____			MRB (QSI042) Approval		
Description Work Order Deviation				Disposition				Completed By	
Root Cause				FAULT CATEGORY					
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐				
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐				
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐				
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐				
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐				
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐				
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐				
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐				
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐				
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐				
Past Expiry Date ☐	Manufacturing Process ☐	OTHER : _____							
Misidentified ☐	Past Due ☐								



APICAL INDUSTRIES, INC.
dba DART AEROSPACE

TRANSACTION CODES (TC):
A-ADD C-CREATE
R-REVISE D-DELETE

ENGINEERING CHANGE NOTICE NO.

05304

SHEET 1 OF 1

DWG NO. 646.4000

REV: C

PREPARED BY J. BECKER

DATE: 02/04/16

EFFECT ON DWG
☐ INC. ☒ UNINC.

DWG TITLE: AS350 CABLE CUTTERS KIT

APPROVED BY:

ENGR. *[Signature]*

MFG *[Signature]*

QC *[Signature]*

EFF. NEXT ORDER

REASON: REVISED F/N 12.

ECR: N/A

ACTION ITEM:
1. N/A

SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 152375 MJS
16-11-10

SHEET 1, BOM IS:

12	R	601.1624	8	16	LOCKNUT	MS21042L3	
F/N	TC	PART NUMBER	4006	4005	DESCRIPTION	MATERIAL	SPECIFICATION
			QTY				
DOCUMENTS EFFECTED:					CHANGE CATEGORY	DER REVIEW REQUIRED	
☐ PATTERN ☐ MDL ☐ INSTALL INSTRUCTIONS ☐ ICA ☐ FMS ☒ BOM					☐ MAJOR ☒ MINOR	☐ YES ☒ NO	

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NOTES:

1 AFTER INSTALLATION, APPLY F/N 54 A/R TO FILL GAPS AND FILLET EDGES.

2 INSTALL F/N 14 WITH F/N 52 & 53.

3 3M VHB ADHESIVE TAPE .025" THICK X .50" WIDE
VENDOR: MCMMASTER-CARR P/N 75935A651.

4 3M TAPE PRIMER 94, APPLY TO BOTH SURFACES A/R BEFORE TAPE.
VENDOR: R.S. HUGHES P/N 021200-24216.

5 REUSE FASTENERS FROM F/N 1.

6 USE WASHERS A/R AS SHIMS TO OBTAIN BEST FITMENT.

7 AT CUSTOMERS OPTION, INSTALL F/N 65 BY MATCH DRILLING ON TO F/N 1.

8 INSTALL SHIM IF OEM PROVISIONS ARE INSTALLED ON AIRCRAFT. REMOVE SHIM LAYERS TO ACHIEVE CORRECT SIZE. MATCH DRILL HOLES. USE F/N 78 SCREW IN PLACE OF F/N 17 SCREW.

9 NEWER INSTALLATIONS ON AIRCRAFT WITH UPDATED CANOPY MAY REQUIRE DIFFERENT LENGTH SCREWS. USE F/N 62 TO REPLACE F/N 44 & F/N 26 IN PLACE OF F/N 41 WHEN NECESSARY.

UNINCORPORATED ECN(S)

05304

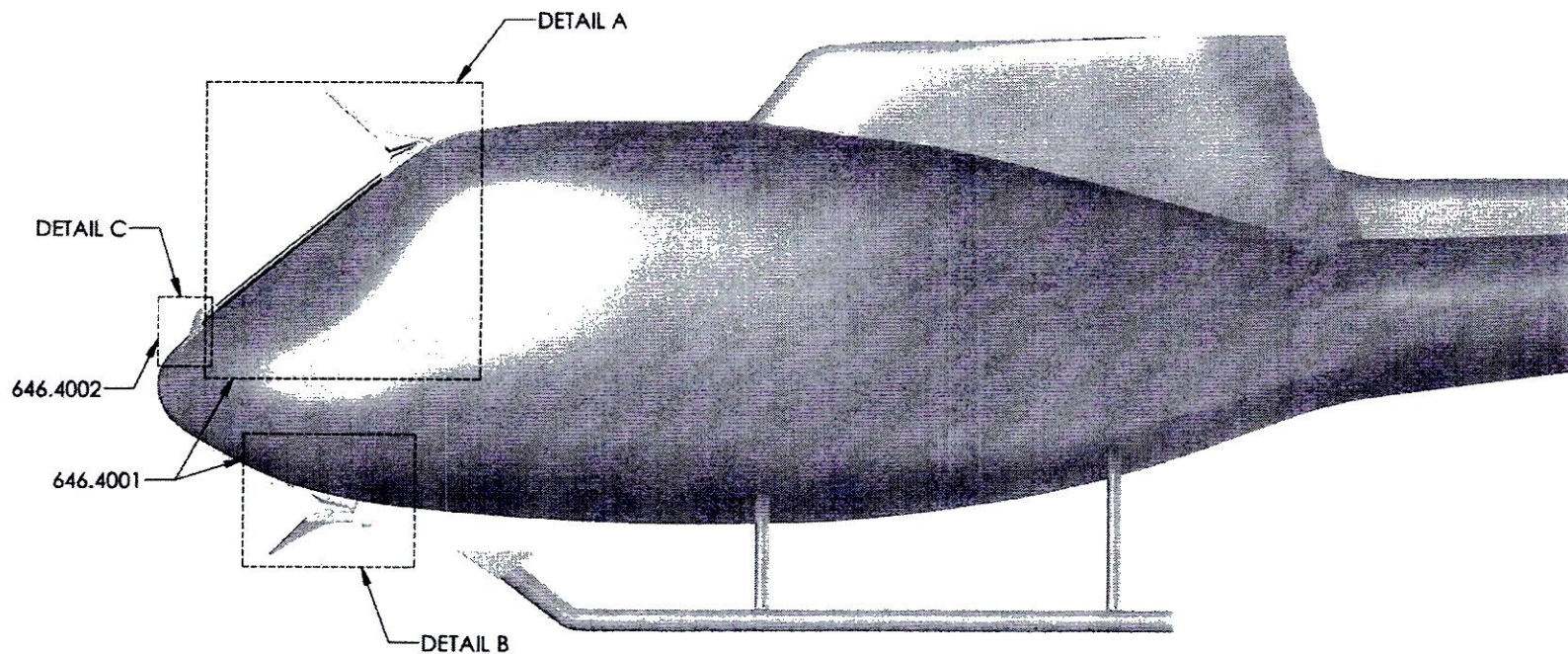
5	5	5	78	601.3875	SCREW	MS24684SSA				
1	1	1	77	646.9410	SHIM					
	4	4	76	601.2764	WASHER	NAS1149F0432P				
		2	75	601.2973	LOCKNUT	MS21042-08				
		2	74	601.2988	SCREW	MS27039-0813				
		2	73	601.2943	LOCKNUT	MS21042-3				
		2	72	601.3128	NUT	AN316CAR				
		2	71	601.3209	LOCKNUT	MS21042-4				
		4	70	601.2638	WASHER	NAS1149F0432P				
		2	69	601.2669	BOLT	AN4C7A				
		2	68	601.3119	CLEVIS	AN465-3AR				
		2	67	601.3121	EYE BOLT	AN465-5A				
		2	66	650.9201	EYE BRACKET ASSY					
	REF	REF	65	647.5701	GPS MOUNT KIT					
			2	64	601.3151	WASHER	NAS1149F0432P			
		2		63	601.2911	SCREW	MS24684SSD			
		24	24	62	601.2637	SCREW	MS27039-1-16			
	2	2	2	61	601.2763	BOLT	AN3-12A			
		1	1	60	646.3913	SHIM				
		4	4	59	646.3912	SHIM				
		1	1	58	646.3911	SHIM				
		4	4	57	646.3910	SHIM				
		5	5	56	600.1013	PRIMER				
	8 FT	8 FT	55	600.0129	VHB TAPE					
	1	1	1	54	600.1012	SEALANT	PR-1425 CLASS B			
		1	1	53	600.0991	MAGNORON 6398 PART B				
		1	1	52	600.0990	MAGNORON 6398 PART A				
	6	10	10	51	601.2826	BOLT	AN3-11A			
			2	50	646.3814	WIPER BRACKET				
			2	49	601.2910	SCREW	MS27039-1-18			
		2		48	601.1365	SCREW	MS27039-1-10			
		2		47	646.3719	DOUBLER				
		2		46	646.3718	CUSTOM WASHER				
		1		45	646.3717	DOUBLER				
		22	2	44	601.1948	SCREW	MS27039-1-19			
		2		43	601.1952	SCREW	MS27039-1-20			
		4		42	601.1956	SCREW	MS27039-1-21			
4006	4003	4004	4003	4002	4001	FIND #	PART #	DESCRIPTION	MATL	SPEC.

REV.	DESCRIPTION	DATE	APPROVED
A	INCORPORATED ECN 0219, 0231, 0219 & 0215	02/06/2010	P. BRAVO
B	INCORPORATED ECN 0304, 0307 & 0401	11/04/2014	P. BRAVO
C	INCORPORATED ECN 0206	08/06/2015	P. BRAVO

		2	2	41	601.2829	SCREW	MS24684SSA			
		2	2	40	601.2831	RIVET	MS20426ADS-7			
		1	1	39	646.3716	GAUGE BRACKET				
		6	6	38	601.1953	SCREW	MS27039-1-12			
	2	2		2	37	646.3715	STRUT DOUBLER			
		2	2	36	601.2824	BOLT	AN3-5A			
12	36			36	35	601.2277	RIVET	DCR04455-02		
6	18			18	34	600.0795	NUTPLATE	MS21047-5		
3	3			3	33	601.2565	RIVET	MS20426ADS-7		
1	1			1	32	646.3813	STRUT BRACKET			
4	4			4	31	601.2822	BOLT	AN3-3A		
2	2			2	30	646.3812	GUSSET BRACKET			
8	8			8	29	601.2564	RIVET	MS20426ADS-6		
1	1			1	28	646.3714	GUSSET			
	1	1		1	27	646.3610	FILLER			
	3	3		3	26	601.2830	SCREW	MS24684SSD		
	2	2		2	25	601.2825	BOLT	AN3-6A		
	1	1		1	24	646.3811	RADIUS BLOCK			
	1	1		1	23	646.3712	CLIP			
	1	1		1	22	646.3711	CLIP			
8	8			8	21	601.2832	RIVET	MS20426ADS-5		
14	14			14	20	601.2020	RIVET	CYS215-5-3		
4	6	4	6	10	19	601.2823	BOLT	AN3-4A		
	1	1	1	1	18	601.2827	BOLT	AN3-13A		
	5	5	5	5	17	601.2912	SCREW	MS24684SSD		
1	1			1	16	646.3713	GUSSET			
1	1			1	15	646.3210	SUPPORT			
		1		1	14	646.3710	DOUBLER			
	1	1		1	13	646.3110	CHANNEL			
14	10	8	53	6	61	12	601.1624	LOCKNUT	MS21042-3	
16	32	18	120	16	144	11	601.1607	WASHER	NAS1149F0432P	
					10	646.3410	LH WIPER DEFLECTOR			
				1	9	646.3411	RH WIPER DEFLECTOR			
		2		2	8	647.7703	STRUT ASSY			
		2		2	7	647.0112	STRUT BRACKET			
	1	1		1	6	646.3511	STRUT			
	1	1		1	5	646.3510	STRUT			
2	2			2	4	646.3810	BRACKET			
		1		1	3	646.2910	DEFLECTOR			
	1	1		1	2	646.3001	LOWER CUTTER ASSY			
		1		1	1	646.3301	UPPER CUTTER ASSY			
X						646.4006	LOWER CUTTER FIXED PROVISIONS			
	X					646.4005	LOWER CUTTER REMOVABLE PROVISIONS			
		X				646.4004	FIXED PROVISIONS KIT			
			X			646.4003	CABLE CUTTERS EX WIPER DEFLECTOR PROVISIONS			
				X		646.4002	ASSYED WIPER DEFLECTOR KIT			
				X		646.4001	ASSYED CABLE CUTTERS KIT			
4006	4005	4004	4003	4002	4001	FIND #	PART #	DESCRIPTION	MATL	SPEC.

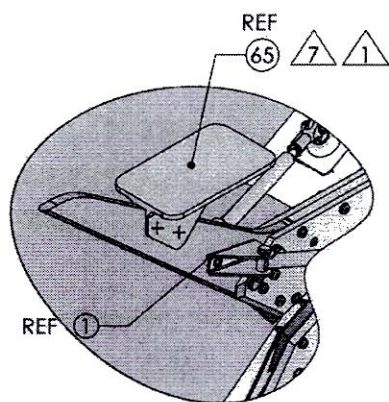
QTY		PARTS LIST	
NEXT ASSY (S)		CHECKED DATE: 08/22/18 DRAWN BY: S. RUFF DESIGNED BY: P. BRAVO APPROVED BY: P. BRAVO DART AEROSPACE 3030 ENTERPRISE CT., SUITE A VISTA, CA 92081 (760) 724-5300	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: 1 PLACE DECIMALS 0.015 2 PLACE DECIMALS 0.003 3 PLACE DECIMALS 0.001		ASS350 CABLE CUTTERS KIT QTY: 1 B: 07/26/16 SCALE: NONE SHEET: 1 OF 5	

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WRITTEN PERMISSION OF APICAL INDUSTRIES OR DART AEROSPACE IS PROHIBITED.



ORIGINAL DATE 1/20/2018		3030 ENTERPRISE CT., SUITE A	
DRAWN BY S. HUE		VISTA, CA 92081	
CHECKED BY T. BRAND		(760) 724-5300	
DRAWING APPROVAL P. BRAND		APICAL INDUSTRIES, INC. DEA DART AEROSPACE	
CONTRACT NO.		AS350 CABLE CUTTERS KIT	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: 3 PLACE DECIMALS ±.010 3 PLACE DECIMALS ±.005 ANGLES ±.5°		SHEET B	REV C
SCALE NONE		SHEET 2 OF 5	

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DETAIL D
TYPICAL GPS MOUNT KIT INSTALLATION

DETAIL D

2 PL 64

2 PL 7
2 PL 74
4 PL 75
4 PL 76

2 PL 51
4 PL 11
2 PL 12

51 2 PL
11 4 PL
73 2 PL

62 2 PL
11 2 PL

69 2 PL
71 2 PL
70 4 PL
66 2 PL
67 2 PL

38 6 PL
11 6 PL

14 1 2

48 2 PL
11 2 PL

47 2 PL
35 4 PL
34 2 PL

2 PL 68
2 PL 72

42 4 PL
11 8 PL
12 4 PL

43 2 PL
11 4 PL
12 2 PL

57 A/R
58 A/R

45 35 4 PL
34 2 PL

44 OR 62 22 PL 9
11 44 PL
12 22 PL

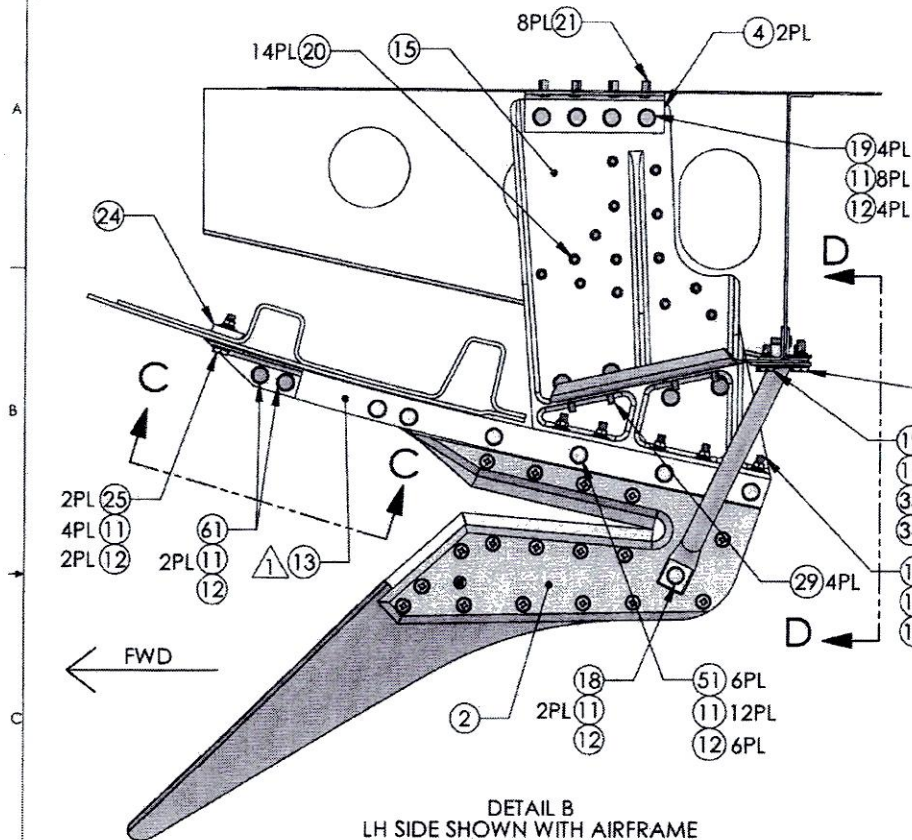
2 PL 40

9 2 PL 26 OR 41
2 PL 12
2 PL 46
A/R 59
A/R 60

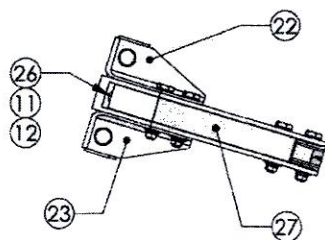
DETAIL A
SHOWN ISOMETRICALLY

OPERATIONAL DATE 08-22-08		DART 3030 ENTERPRISE CT., SUITE A VISTA, CA 92081 (760)-724-5300	
DRAWN BY S. HUI	CHECKED BY P. BRAVO	AS350 CABLE CUTTERS KIT	
DRAWINGS APPROVAL P. BRAVO		SHEET B	CADD CODE 071026
CONTRACT NO.		DWG. NO. 646.4000	REV C
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: 3 PLACE DECIMALS .003 ANGLES ± .5°		SCALE NONE	SHEET 3 OF 3

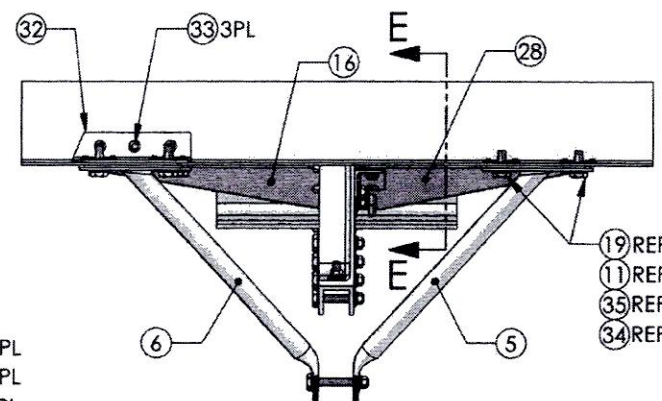
THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF AFICAL INDUSTRIES DBA DART AEROSPACE. ANY REPRODUCTION IN PART OR WHOLE WITHOUT THE EXPLICIT WRITTEN PERMISSION OF AFICAL INDUSTRIES DBA DART AEROSPACE IS PROHIBITED.



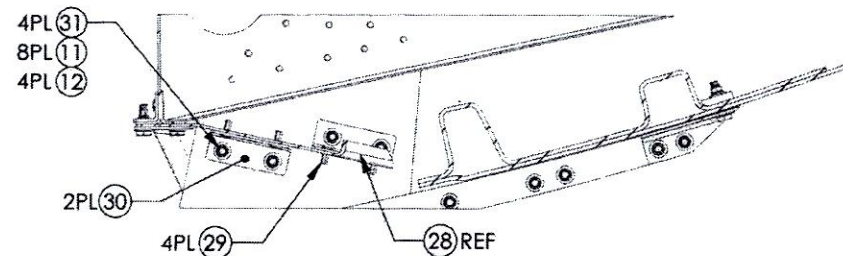
DETAIL B
LH SIDE SHOWN WITH AIRFRAME



SECTION C-C



SECTION D-D
CUTTER HIDDEN FOR CLARITY

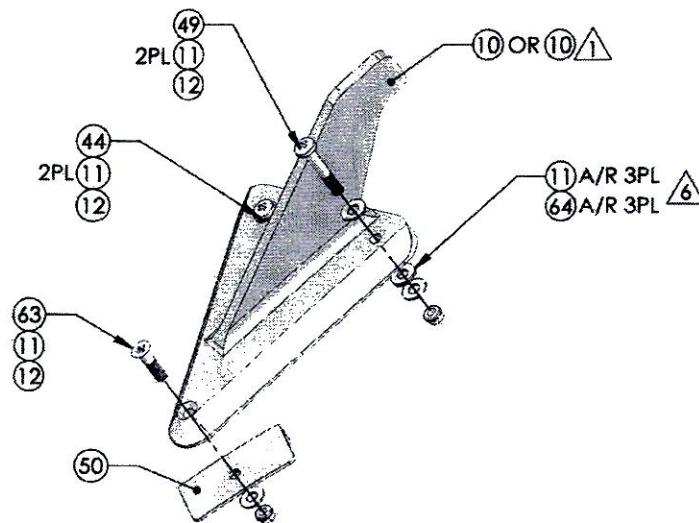


SECTION E-E

ORIGINAL DATE 10/20/2011	DESIGNER D. TAYLOR	DART AEROSPACE 3030 ENTERPRISE CT., SUITE A VISTA, CA 92081 (760) 724-5300 AFICAL INDUSTRIES, INC. DBA DART AEROSPACE
DRAWN BY S. HUFF	CHECKED BY P. BRAYDO	
ENGINEERING APPROVAL P. BRAYDO		
CONTRACT NO. 28-22-20		
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: 2 PLACE DECIMALS ± 0.01 3 PLACE DECIMALS ± 0.005 ANGLES ± 0.1°		MFG. PART CODE B 07M36 DWG. NO. 646.4000 REV. C SCALE NONE SHEET 4 OF 5

AS350 CABLE CUTTERS KIT

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DBA DART AEROSPACE. ANY REPRODUCTION IN PART OR WHOLE WITHOUT THE EXPLICIT
WRITTEN PERMISSION OF APICAL INDUSTRIES DBA DART AEROSPACE IS PROHIBITED.



DETAIL C
LH SHOWN EXPLODED
RH OPPOSITE

ORIGINAL DATE 08-27-08		DART AEROSPACE 3030 ENTERPRISE CT. SUITE A VISTA, CA. 92081 (760)-724-5300	
DRAWN BY S. HURT		CHECKED BY P. BRAVO	
DRAWING APPROVAL P. BRAVO		APICAL INDUSTRIES, INC. DBA DART AEROSPACE	
CONTRACT NO.		AS350 CABLE CUTTERS KIT	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: 2 PLACE DECIMALS ±.010 3 PLACE DECIMALS ±.005 ANGLES ±.5°		SIZE B	QTY 07M26
SCALE NONE		DWG NO. 646.4000	REV. C
SHEET 5 OF 5			

REFERENCE ONLY

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NOTES:

1 AFTER INSTALLATION, APPLY F/N 54 A/R TO FILL GAPS AND FILLET EDGES.

2 INSTALL F/N 14 WITH F/N 52 & 53.

3 3M VHB ADHESIVE TAPE .025" THICK X .50" WIDE
VENDOR: MCMASTER-CARR P/N 75935A651.

4 3M TAPE PRIMER 94, APPLY TO BOTH SURFACES A/R BEFORE TAPE.
VENDOR: R.S. HUGHES P/N 021200-24216.

5 REUSE FASTENERS FROM F/N 1.

6 USE WASHERS A/R AS SHIMS TO OBTAIN BEST FITMENT.

7 AT CUSTOMERS OPTION, INSTALL F/N 65 BY MATCH DRILLING ON TO F/N 1.

8 INSTALL SHIM IF OEM PROVISIONS ARE INSTALLED ON AIRCRAFT. REMOVE SHIM LAYERS TO ACHIEVE CORRECT SIZE. MATCH DRILL HOLES. USE F/N 78 SCREW IN PLACE OF F/N 17 SCREW.

9 NEWER INSTALLATIONS ON AIRCRAFT WITH UPDATED CANOPY MAY REQUIRE DIFFERENT LENGTH SCREWS. USE F/N 62 TO REPLACE F/N 44 & F/N 26 IN PLACE OF F/N 41 WHEN NECESSARY.

UNINCORPORATED ECN(s)

05304

5	5	5	78	601.3875	SCREW	MS21042-08				
1	1	1	77	646.9410	SHIM	△				
	4	4	76	601.2764	WASHER	NAS1149N002P				
	2	2	75	601.2973	LOCKNUT	MS21042-08				
	2	2	74	601.2988	SCREW	MS22703P-0813				
	2	2	73	601.2943	LOCKNUT	MS21042-3				
	2	2	72	601.3128	NUT	ANS110C4R				
	2	2	71	601.3209	LOCKNUT	MS21042L4				
	4	4	70	601.2638	WASHER	NAS1149F0432P				
	2	2	69	601.2669	BOLT	ANNC7A				
	2	2	68	601.3119	CLEVIS	AN645-34R				
	2	2	67	601.3121	EYE BOLT	AN648-5A				
	2	2	66	650.9201	EYE BRACKET ASSY					
REF	REF	REF	65	647.5701	GPS MOUNT KIT	△				
		2	64	601.3151	WASHER	NAS1149P0043P				
		63	601.2911	SCREW	MS246945S3					
	24	24	62	601.2637	SCREW	MS22703P-1-16				
2	2	2	61	601.2763	BOLT	ANS-12A				
	1	1	60	646.3913	SHIM					
	4	4	59	646.3912	SHIM					
	1	1	58	646.3911	SHIM					
	4	4	57	646.3910	SHIM					
	5	5	56	600.1013	PRIMER					
	8 FT	8 FT	55	600.0129	VHB TAPE					
	1	1	54	600.1012	SEALANT	PG-1405 CLASS B				
	1	1	53	600.0991	MAGNABOND 6398 PART B	△				
	1	1	52	600.0990	MAGNABOND 6398 PART A	△				
6	10	10	51	601.2826	BOLT	ANS-11A				
		2	50	646.3814	WIPER BRACKET					
		2	49	601.2910	SCREW	MS22703P-1-10				
	2	2	48	601.1365	SCREW	MS22703P-1-10				
	2	2	47	646.3719	DOUBLER					
	2	2	46	646.3718	CUSTOM WASHER					
	1	1	45	646.3717	DOUBLER					
	22	2	44	601.1948	SCREW	MS22703P-1-19				
	2	2	43	601.1952	SCREW	MS22703P-1-20				
	4	4	42	601.1956	SCREW	MS22703P-1-21				
4006	4003	4004	4003	4002	4001	FIND #	PART #	DESCRIPTION	MATL	SPEC.

REV.	DESCRIPTION	DATE	APPROVED
A	INCORPORATED ECN 05304, 05301, 05319 & 05745	02/06/2010	P. BRAVO
B	INCORPORATED ECN 05046, 05079 & 04731	11/04/2014	P. BRAVO
C	INCORPORATED ECN 05096	09/04/2015	P. BRAVO

		2		2	41	601.2829	SCREW	MS246945S4		
		2		2	40	601.2831	RIVET	MS20406ADS-7		
		1		1	39	646.3716	GAUGE BRACKET			
		6		6	38	601.1953	SCREW	MS22703P-1-12		
	2			2	37	646.3715	STRUT DOUBLER			
	2	2		2	36	601.2824	BOLT	ANS-5A		
12	36			36	35	601.2272	RIVET	CCY2463-05		
6	18			18	34	600.0795	NUTPLATE	MS21047-5		
3	3			3	33	601.2565	RIVET	MS20470ADS-7		
1	1			1	32	646.3813	STRUT BRACKET			
4	4			4	31	601.2822	BOLT	ANS-3A		
2	2			2	30	646.3812	GUSSET BRACKET			
8	8			8	29	601.2564	RIVET	MS20470ADS-6		
1	1			1	28	646.3714	GUSSET			
	1	1		1	27	646.3610	FILLER			
	3	3		3	26	601.2830	SCREW	MS246945S5		
	2	2		2	25	601.2825	BOLT	ANS-6A		
	1	1		1	24	646.3811	RADIUS BLOCK			
	1	1		1	23	646.3712	CLIP			
	1	1		1	22	646.3711	CLIP			
8	8			8	21	601.2832	RIVET	MS20470ADS-5		
14	14			14	20	601.2020	RIVET	CH5215-5-3		
4	6	4	6	10	19	601.2823	BOLT	ANS-4A		
	1	1		1	18	601.2827	BOLT	ANS-13A		
	5	5		5	17	601.2912	SCREW	MS246945S1		
1	1			1	16	646.3713	GUSSET			
1	1			1	15	646.3210	SUPPORT			
	1	1		1	14	646.3710	DOUBLER			
	1	1		1	13	646.3110	CHANNEL			
14	10	8	53	6	61	12	601.1624	LOCKNUT	MS21048L3	
16	32	18	120	16	144	11	601.1607	WASHER	NAS1149N002P	
				1	10	646.3410	WIPER DEFLECTOR			
				1	9	646.3411	WIPER DEFLECTOR			
		2		2	8	647.7703	STRUT ASSY			
		2		2	7	647.0112	STRUT BRACKET			
	1	1		1	6	646.3511	STRUT			
	1	1		1	5	646.3510	STRUT			
2	2			2	4	646.3810	BRACKET			
				1	3	646.2910	DEFLECTOR			
	1	1		1	2	646.3001	LOWER CUTTER ASSY			
		1		1	1	646.3301	UPPER CUTTER ASSY			
X						646.4006	LOWER CUTTER FIXED PROVISIONS			
	X					646.4005	LOWER CUTTER REMOVABLE PROVISIONS			
		X				646.4004	FIXED PROVISIONS KIT			
			X			646.4003	CABLE CUTTERS EX WITHOUT FIXED PROVISIONS			
				X		646.4002	AS350 WIPER DEFLECTOR KIT			
					X	646.4001	AS350 CABLE CUTTERS KIT			
4006	4005	4004	4003	4002	4001	FIND #	PART #	DESCRIPTION	MATL	SPEC.

QTY		PARTS LIST	
NEXT ASSY (S)		ORIGINAL DATE: 08-27-08 DRAWN BY: P. BRAVO CHECKED BY: P. BRAVO DRAWING APPROVAL: P. BRAVO CONTRACT NO.:	
UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE IN INCHES. COORDINATES ARE 2 PLACE DECIMALS. 0.001 ANGLES ± .5°		DART 3030 ENTERPRISE CT., SUITE A VISTA, CA 92081 (760)-724-5300 APICAL INDUSTRIES, INC. DBA DART AEROSPACE	
AS350 CABLE CUTTERS KIT		REV. C SCALE: NONE SHEET 1 OF 5	